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MANUAL FOR THE DEVELOPMENT OF STATE  
RECOMMENDATIONS FOR AIR QUALITY CONTROL  
REGIONS

National Air Pollution Control Administration  
Washington, D. C.

January 1970

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MANUAL  
FOR THE DEVELOPMENT  
OF  
STATE RECOMMENDATIONS  
FOR  
AIR QUALITY CONTROL REGIONS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
Public Health Service  
Consumer Protection and Environmental Health Service  
National Air Pollution Control Administration  
January 1970

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## PREFACE

The Secretary, Department of Health, Education, and Welfare, is directed by the Clean Air Act, as amended, to designate air quality control regions to set in motion the machinery for regional air pollution control. State governments are then expected to adopt air quality standards within those air quality regions, and establish plans to implement those standards. The establishment of air quality control regions has to this point been the result of Federally initiated action, specifying areas where regions should be designated, and formally proposing for consultation with State and local authorities, boundaries for those regions.

The purpose of this document is to outline a policy by which States may, upon their own initiative, recommend to the National Air Pollution Control Administration boundaries for air quality control regions. These recommendations may be for areas presently announced for designation by the Federal Government, or may be in additional areas which the States feel should be formally designated as air quality control regions. Part I provides a brief description of the mechanisms of the Clean Air Act as it relates to air quality control regions. Part II outlines the approach presently being used by the Federal Government to designate regions. Part III describes in detail the policy which will allow States to request the designation of air quality control regions and prepare reports recommending boundaries for regions. Part IV includes a detailed description of the factors which should be considered by the States in preparing a formal recommendation for the boundaries of an air quality control region. Part V discusses requirements of the Executive Office of the President relative to the designation of air quality control regions.

## TABLE OF CONTENTS

|             |                                                                              |    |
|-------------|------------------------------------------------------------------------------|----|
| PART I.     | REQUIREMENTS OF THE CLEAN AIR ACT.....                                       | 1  |
| PART II.    | FEDERAL INITIATION OF AIR QUALITY<br>CONTROL REGIONS.....                    | 3  |
| PART III.   | DEVELOPMENT OF STATE RECOMMENDATIONS FOR<br>AIR QUALITY CONTROL REGIONS..... | 6  |
| PART IV.    | FACTORS TO BE CONSIDERED IN A STATE<br>RECOMMENDATION.....                   | 10 |
|             | A. Introduction.....                                                         | 10 |
|             | B. Air Quality Control Region Objectives...                                  | 10 |
|             | C. Engineering Evaluation.....                                               | 11 |
|             | 1. Introduction.....                                                         | 11 |
|             | 2. Emission Inventory.....                                                   | 11 |
|             | 3. Air Quality.....                                                          | 12 |
|             | D. Urban Factors Evaluation.....                                             | 14 |
|             | 1. Introduction.....                                                         | 14 |
|             | 2. Population Distribution.....                                              | 14 |
|             | 3. Industrial Activity.....                                                  | 15 |
|             | 4. Land Use.....                                                             | 15 |
|             | 5. Existing Regional Arrangements.....                                       | 15 |
|             | 6. Other.....                                                                | 16 |
|             | E. Summary.....                                                              | 17 |
| PART V.     | REQUIREMENTS OF THE EXECUTIVE OFFICE OF<br>THE PRESIDENT.....                | 18 |
| APPENDIX A. | LIST OF AIR QUALITY CONTROL REGIONS.....                                     | 19 |
| APPENDIX B. | TECHNICAL AND NON-TECHNICAL DATA SOURCES....                                 | 20 |

## PART I. REQUIREMENTS OF THE CLEAN AIR ACT

Air pollution in the Nation's urban areas has long been recognized as a community problem. In light of this, the Clean Air Act, as amended (42 U.S.C. 1857 et seq.), has provided for an intergovernmental system for the prevention and control of air pollution on a regional basis. The Secretary, Department of Health, Education, and Welfare, is directed by Section 107(a)(2) of the Act to "...designate air quality control regions based on jurisdictional boundaries, urban-industrial concentrations and other factors including atmospheric areas necessary to provide adequate implementation of air quality standards."

To set in motion the machinery for regional air pollution control, the Department of Health, Education, and Welfare must designate air quality control regions and issue air quality criteria and corresponding control technology documents for individual pollutants. State governments are then expected to adopt air quality standards for the pollutants for which criteria have been issued, and establish plans for the implementation of the air quality standards for areas included in air quality control regions. A document entitled, Guidelines for the Development of Air Quality Standards and Implementation Plans has been issued by the Department of Health, Education, and Welfare to assist State governments in developing air quality standards and implementation plans that can be considered consistent with the provisions and the intent of the Act.

Air quality standards and implementation plans must be submitted to the Department for review. After the standards and plans are approved, the States are responsible for the prevention and control of air pollution in designated air quality control regions in accordance with those standards and plans. This procedure is depicted by the flow chart in Figure 1.

In summary, the Act provides an orderly approach to control air pollution involving a coordinated effort between Federal, State, and local levels of government. The role of the Federal Government is to provide leadership and to encourage and assist in the development and operation of regional air pollution control programs. However, the prevention and control of air pollution at its source is the primary responsibility of States and local governments.

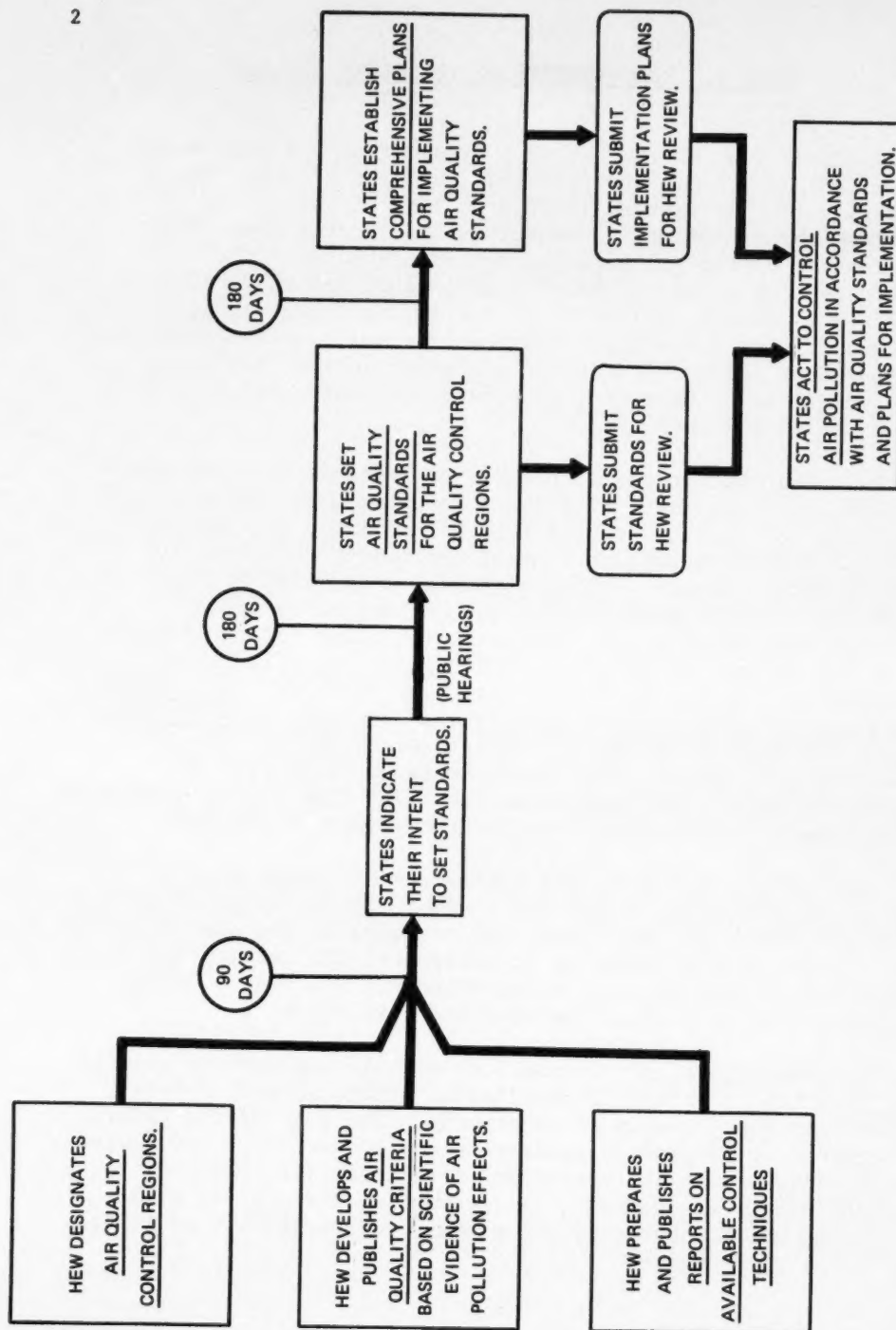


Figure 1. FLOW DIAGRAM FOR ACTION TO CONTROL AIR POLLUTION ON A REGIONAL BASIS, UNDER THE CLEAN AIR ACT

## PART II. FEDERAL INITIATION OF AIR QUALITY CONTROL REGIONS

At the present time, air quality control region designations follow an orderly process in which the Department of Health, Education, and Welfare (DHEW) selects areas in which regions are to be designated, and formally proposes boundaries for those regions. On June 20, 1968, the Secretary, Department of Health, Education, and Welfare, announced that 32 of the largest and most severely polluted urban areas in the country would be designated as air quality control regions. On March 24, 1969, the Commissioner of the National Air Pollution Control Administration (NAPCA) selected 25 additional areas to be designated as regions, based not only upon the severity of the problem in those areas, but also upon a desire to involve all the States in the machinery of the Clean Air Act. The list of 57 regions is presented in Appendix A in the approximate order in which designation is expected to take place. Regions have already been officially designated by the Secretary in several of these metropolitan areas.

The Federal approach to designating regions involves a procedure which attempts to insure maximum cooperation with State and local governments during the designation process. Initially, visits are made by DHEW officials to inform State officials (the Governor or the Governor's representative, the Commissioner of the State Health Department, and air pollution control officials) of the designation procedure and of their responsibility under the Act.

Following these visits, actual data-gathering is begun for the compilation of an emissions inventory and for the preparation of a report which will propose boundaries for an air quality control region. Figure 2 provides an indication of the basic technical and non-technical factors considered before a region proposal is made. Part IV of this document discusses these factors in greater detail. Appendix B presents a partial list of the various sources which may be contacted to provide specific types of data.

Figure 2 indicates that after consideration of technical, demographic, and jurisdictional factors, a preliminary geographic definition of a region is made. The boundary proposal is set forth in a report which includes a discussion of how the suggested boundaries were chosen. This report serves as a background document for a formal Consultation, open to the general public, in which participation is limited to appropriate State and local authorities. A copy of the report, along with a cover letter specifying the time, date, and place of the Consultation, is forwarded to appropriate Federal, State, and local authorities and agencies affected by or possessing an official interest in the region designation.

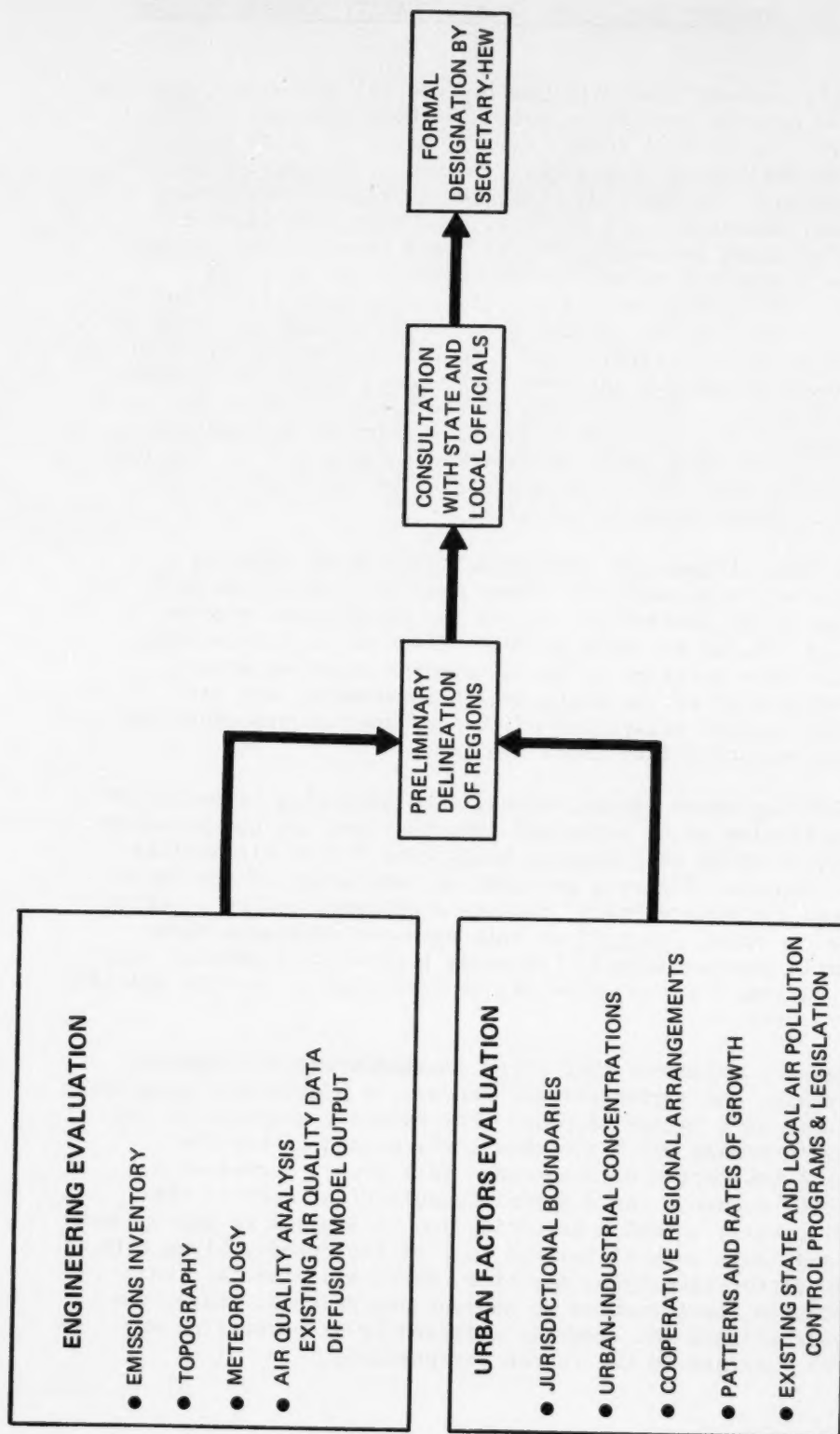


Figure 2. FLOW DIAGRAM FOR THE DESIGNATION OF AIR QUALITY CONTROL REGIONS.

Along with the issuance of a Consultation report, a notice is placed in the Federal Register, which lists the jurisdictions included in the region proposed by DHEW. The notice sets forth the time, date, and meeting place for the formal Consultation. The notice also states that interested persons may submit to the Commissioner, National Air Pollution Control Administration, within 30 days of the publication date of the notice, written data, views, or arguments concerning the Federal proposal.

A press notice is timed for release on the date of the Federal Register notice to insure that all interested parties are aware of the Federal Government's proposal for a region and of its plans to hold a Consultation.

A formal Consultation provides the opportunity for officials representing the Governor(s) of the State(s) involved in a designation, as well as officials at the local levels of government, to comment on the region boundaries proposed by DHEW. Before reaching a final decision regarding a region's boundaries, NAPCA will review the Consultation transcript and all written comments and views pertaining to the Federal proposal. After this review, NAPCA will submit to the Secretary, DHEW, recommendations relating to the boundaries of a region. Final designation of a region by the Secretary is announced in the Federal Register. In addition to this notice, a letter announcing the designation is sent by the Secretary to the Governor(s) of the State(s) affected by the designation and to the Governor's official representative(s) on air pollution matters. A press release is timed to coincide with the Federal Register notice of final designation.

PART III. DEVELOPMENT OF STATE RECOMMENDATIONS  
FOR AIR QUALITY CONTROL REGIONS

The Clean Air Act, as amended, states that..."the Secretary after consultation with appropriate State and local authorities shall...designate air quality control regions based on jurisdictional boundaries, urban-industrial concentrations, and other factors including atmospheric areas necessary to provide adequate implementation of air quality standards." Only the Secretary, Department of Health, Education, and Welfare (DHEW), can designate an air quality control region pursuant to the Clean Air Act. However, in the statement of purpose of the Act, it is stated that: "prevention and control of air pollution at its source is the primary responsibility of States and local governments..." Accordingly, the Act requires that States adopt standards of air quality and establish plans for the implementation of those standards in areas included within air quality control region boundaries. To allow the States to share a larger role in carrying out the intent of the Act, the Department of Health, Education, and Welfare has announced a policy which encourages the States to: (a) submit boundary recommendations for those areas among the list of 57 announced for early designation by the Federal Government, and (b) initiate requests and prepare reports recommending boundaries for air quality control regions in those additional areas where they feel a regional approach to air resource management is required.

The procedure for State-initiated regions requires that the Governor of a State, or the Governor's official representative, notify in writing the Commissioner of the National Air Pollution Control Administration (NAPCA) of the desire to have an air quality control region designated in a specified urban area. This notification should announce the intent of the State to prepare a written report recommending region boundaries and providing a thorough justification of these boundaries based on considerations similar to those outlined in Part IV of this document.

To the extent that resources are available, NAPCA will provide technical advice and assistance to a State, when requested, to aid in the development of a report which recommends region boundaries. Such assistance will depend upon, among other things, the development of a timetable for designation agreeable to the State and to NAPCA. Priority will be given to the designation of regions in the 57 areas which have been announced by DHEW (see Appendix A). However, every effort will be made to speed the designation process for regions in which States have prepared boundary recommendations, whether they are for areas on the list of 57 regions or for additional urban areas.

The various technical and non-technical factors which are suggested for consideration by a State when producing a report are discussed in detail in Part IV. NAPCA will provide guidance to a requesting State during the preparation of a report recommending boundaries for a region. Staff time will be devoted to assisting and consulting with a State agency as its report writing proceeds. Ideally, the completed report will contain the necessary discussion of all pertinent technical and non-technical factors, complete with charts, tables, and maps to supplement these discussions.

After a State's recommendation has been formally submitted to NAPCA, the Federal Government will arrange for its reproduction and distribution. The published document will include a preface and an introduction which will outline the mechanics of the Clean Air Act, and will discuss the procedures by which regions are designated. The introduction will stress the distinction, if any, between the State boundary recommendation and the official boundary proposal of the Federal Government. The comments and conclusions contained in the State-generated recommendation may or may not coincide with the views of the Federal Government. The State's recommendations for region boundaries do not constitute a Federal boundary proposal. The Federal proposal will be published in the Federal Register prior to the formal Consultation.

NAPCA will mail the completed report, along with a letter indicating the time, date, and place of the formal Consultation, to appropriate Federal, State, and local authorities and agencies affected by or possessing an official interest in the region designation. It will be the responsibility of NAPCA to arrange suitable facilities for the Consultation, to provide reporting services, and to seek a mutually agreeable date for the Consultation.

Public notice of NAPCA's intent to hold a formal Consultation will be published in the Federal Register. This notice will, of course, specify the boundaries of the region proposed by the Federal Government. It will also specify the time, date, and place of the Consultation, and will inform all parties of the opportunity to submit written comments on the region boundaries to the Commissioner, NAPCA. At the same time, NAPCA will arrange for the release of a press notice containing information outlined in the Federal Register notice, and specifying the Federal and State governments' region boundary proposals.

The formal Consultation will provide the Federal Government the opportunity to announce its official views and comments on the State's recommendation. At the Consultation, the State may

summarize its findings and present additional comments. The Consultation will allow local governmental authorities to present their views regarding the region boundaries. The Consultation will be open to the public, though participation is limited to appropriate Federal, State, and local officials. All interested persons are encouraged to present their written views to the Commissioner, NAPCA. Written comments will be accepted during a 30-day period beginning from the date of publication of the Federal Register notice. The proceedings of the Consultation will be transcribed. The official transcript will be available for purchase from the reporting service at the expense of the requesting party.

A thorough review of the Consultation transcript, and all written comments received, will be undertaken by the Federal Government prior to the final designation of the region by the Secretary, DHEW. Before reaching a decision, consideration will be given to all factors, including the degree of concurrence or disagreement among the Federal, State, and local authorities, as reflected by the Consultation transcript and written comments. Final designation by the Secretary will be announced in the Federal Register, by the issuance of a press release, and by a letter to the Governor(s) and to the Governor's official representative(s) on air pollution matters. A press release will coincide with the publication of final designation in the Federal Register.

Figure 3 presents a flow diagram of the various steps involved in the designation of a State-initiated region. These steps are substantially the same as outlined in Part II; the major difference is that the States have the primary responsibility for producing reports supporting recommended region boundaries.

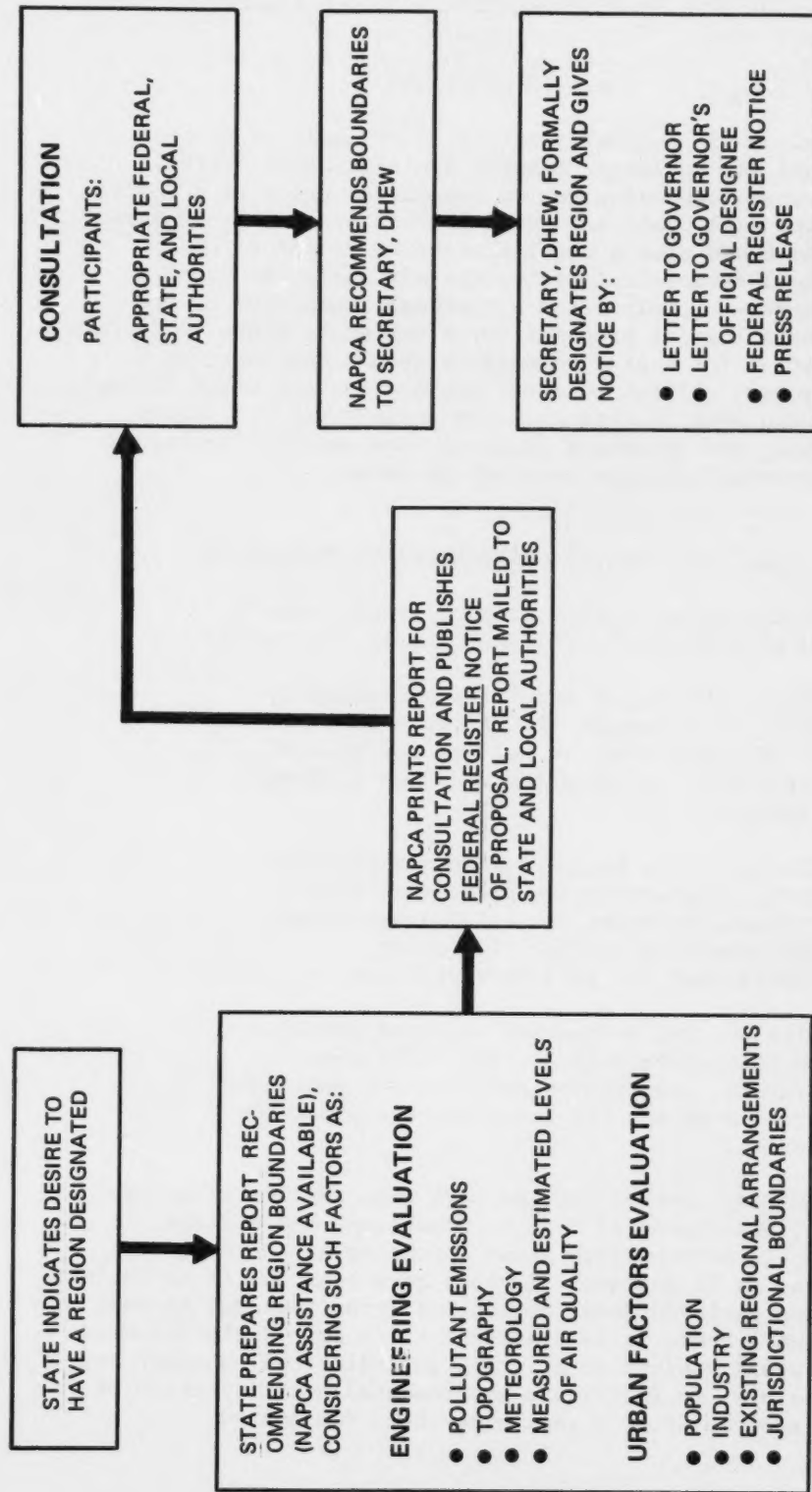


Figure 3. FLOW DIAGRAM FOR STATE-INITIATED AIR QUALITY CONTROL REGIONS.

PART IV. FACTORS TO BE CONSIDERED IN A STATE RECOMMENDATION

## A. INTRODUCTION

As part of the Federally-initiated designation process, the National Air Pollution Control Administration (NAPCA) issues a report proposing region boundaries prior to a formal Consultation with State and local authorities. The boundary proposal is based upon a consideration of technical and non-technical factors related to the air pollution problem in an urban area. Only after a thorough evaluation of these factors may a logical proposal for a region be made. A State's recommendation for region boundaries should consider, in a similar manner, all the relevant engineering and urban factors. The following section discusses air quality control region requirements, and discusses in detail the specific technical and non-technical factors referred to above.

## B. AIR QUALITY CONTROL REGION OBJECTIVES

Generally, an air quality control region should be designated to achieve the following basic objectives:

First, the region should be sufficiently large to encompass the majority of sources in an urban area, as well as the bulk of the people and property affected by those sources.

Secondly, the boundaries should encompass those locations where present development creates, or where projected urbanization and industrialization will create, significant air pollution problems.

Finally, the boundaries selected should be compatible with, or hopefully even promote, cooperative governmental administration of the air resource throughout the region.

Air quality control regions have been designated by the Secretary, Department of Health, Education, and Welfare, in several large metropolitan areas appearing at the beginning of the list of 57 regions. Regions have been chosen to conform to existing jurisdictional boundaries (counties, and in some cases, towns) where it is practical to do so. State recommendations should conform to existing jurisdictional boundaries, where feasible, to facilitate governmental administration of the air resource after a region has been designated.

The geographic size of a region should be a consideration only to the extent that it may affect the source-control and air quality attainments of a regional air pollution control effort. A large region, containing scattered urban areas separated by large undeveloped areas, may lead to difficulties in implementing, maintaining, and enforcing the air quality and emission standards applied to that region. Inclusion of large, undeveloped jurisdictions, to embody a few scattered point sources or a peripheral urban community, should be weighed against the pollutant contribution of those sources to the ambient air of a region. Conversely, a region which is too small to include most of an urban area's sources might result in difficulties in achieving air quality goals. Proper assessment of these goals should result in a region neither too large to be administered effectively, nor too small to be incompatible with the physical extent of a community air pollution problem.

### C. ENGINEERING EVALUATION

#### 1. Introduction

The objective of the engineering evaluation is to determine the geographic extent of the community air pollution problem centered on an urban area. This evaluation should include a thorough investigation of the pollutant source-receptor system in a particular area, considering such factors as the nature and location of pollutant sources, quantities of source emissions, topography, meteorology, and measured and predicted levels of air quality.

#### 2. Emissions Inventory

The compilation of an emissions inventory makes possible the correlation of pollutant emissions with specific geographic locations. This results in the identification of the "core" of an air pollution problem area--that is, the area where the bulk of pollutant emissions occur. This source-inclusive area identifies the minimum desirable extent of an air quality control region.

The National Air Pollution Control Administration plans to conduct emission inventories in each of the 57 metropolitan areas listed in Appendix A. Completed inventory reports for these areas, along with tabulated data and pertinent maps, will be made available, where possible, to State authorities who desire to prepare their own region boundary recommendations.

These inventories are being conducted in substantially the same order as listed. A change in the announced order of designation as a result of State recommendation of boundaries for one of those 57 areas will depend upon the availability of NAPCA resources to permit a speed-up in completion of an emissions inventory or upon the ability of the State to complete such an emissions inventory. The designation process for State-initiated recommendations in areas not on the list of 57 areas will be scheduled, depending on when requests for such designations were made, and on the capability of the States to complete emissions surveys for these areas.

The survey area for an emissions inventory should be decided upon after discussions between NAPCA and State and local air pollution control officials. Survey areas should be large enough to include all major pollutant sources which are connected to a metropolitan core or which are likely to have a substantial influence upon air quality in a potential region. The States are encouraged to develop in consultation with NAPCA, and with the aid of local control programs, completed inventories in areas on the announced list of 57 areas. Such initiative on the part of the States will result in a speed-up of the designation process.

The completed inventories will provide the necessary data for presentation and discussion in the State report. The State reports should include a brief description of the survey methodology and present the basic data acquired by the inventory either in graphic or tabular form. Graphic presentations should include maps of the study area, the grid coordinate system, the location of major point sources, and emission densities.\*

Primary consideration should be given to three of the more common pollutants--sulfur dioxide, particulate matter, and carbon monoxide. These pollutants provide a general measure of the geographic extent of the air pollution problem in an urban area since they reflect the major source types, and since their presence in the ambient air is generally indicated by extensive monitoring activity.

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\* Inventory results are most amenable to interpretation when presented in the form of emission density maps (weight of pollutants emitted per unit area, usually based on a grid-coordinate system) for the individual pollutants of concern.

Measured levels of air quality provide the most reliable guide to the identification of areas affected by air contaminants. The availability of such data is dependent upon the degree to which pollutant monitoring activity--primarily by State and local control programs--has been conducted in an area. The data collected by independent State and local sampling networks should be supplemented by data gathered at the cooperating stations of the various National Air Surveillance Networks.

Long-term (monthly, seasonal, and annual average concentrations) air quality conditions provide a better measure of the area most amenable to the concept of regional air resource management than do short-term or "episodic" conditions. In any event, the geographic scope of existing sampling networks is often too limited to provide adequate information on patterns of air quality over a large area and may be insufficient to define region boundaries. Since most sampling occurs in urban areas, the measurements normally reflect air quality conditions in what is already recognized as the "core" of an air quality control region. Nevertheless, this air quality data may provide clues to the location of isolated problem areas, or to the patterns of air pollutant dispersion, which would help in the determination of region boundaries.

To derive as complete a picture as possible of existing levels of air pollutants in an area, it is desirable to augment existing air monitoring data with atmospheric diffusion model results to predict pollutant dispersion characteristics. NAPCA has made provision to apply the diffusion model technique to all areas on the present list of 57 regions (see Appendix A).<sup>\*</sup> NAPCA will make the appropriate diffusion model program available to those States wishing to apply the model to any of these areas, or to additional areas not on the list. The application of the model, in any case, depends on the availability of emissions and meteorological input data for a particular area.

If computed by NAPCA, the diffusion model results and appropriate meteorological data will be supplied to the States. The diffusion model results will include concentration contours for the winter, summer, and annual averaging times for sulfur oxides, suspended particulates, and carbon monoxide. Wind data and mixing depths used by the model will also be made available. A brief discussion will be supplied to the States, describing the model, its limitations, and the proper interpretation of its results.

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<sup>\*</sup>The diffusion model will be selectively applied to those areas where topography will not destroy the basic ability of the model to present an accurate picture of pollutant dispersion patterns and ambient air concentrations.

The topography and meteorology in an area should receive attention when defining region boundaries. This is particularly true in areas where unfavorable meteorological conditions tend to promote air pollution. Topography, in many instances, influences meteorology to the extent that localized air pollution problems occur. These conditions may be present where river valleys or mountainous terrain restrict pollutant dispersion, and create natural air basins. Thus natural topographical features which influence meteorology and in turn influence conditions of air pollution, may influence the final decision regarding region boundaries.

#### D. URBAN FACTORS EVALUATION

##### 1. Introduction

The Clean Air Act, as amended, calls for the designation of air quality control regions based on "jurisdictional boundaries, urban-industrial concentrations, and other factors" to provide adequate implementation of air quality standards. The size of a region must also be based on a consideration of existing regional arrangements, and patterns and rates of urban growth. This evaluation should complement the engineering study, by determining the nature and location of pollutant sources (residential and industrial land use, intensity of manufacturing activity, vehicular traffic patterns, etc.) and pollutant receptors (population distribution, urban development pattern).

##### 2. Population Distribution

Air quality control regions should be defined to include most interacting pollutant sources and receptors in a common area. The location of population provides an ideal measure of the likely geographic extent of this interaction because first, human activity is a basic cause of air pollution, and second, human beings are the most important receptors of pollution. Thus, population statistics indicate the areas in which pollution needs to be controlled, and in which protection from air pollution must be afforded.

Projected population statistics are valuable in the same way as are present population statistics. Air quality control regions must be designed to meet not only present conditions of urbanization, but also future conditions, to achieve and maintain desired levels of air quality. Thus, the decision regarding the size of a region should be influenced by both present and future population conditions.

Population distribution and population growth should be considered not only in terms of absolute numbers, but also in terms of geographic density. Generally, the quantities of pollutants emitted and the levels of pollutants in the ambient air bear a direct relationship to the total population in an urban area, and to the population densities at various locations within the urban area. Population data is useful not only when presented in tabular form by jurisdiction, but also when presented visually in terms of population density maps.

### 3. Industrial Activity

The location of industrial activity should be considered when determining region boundaries since industrial sources are major contributors of air pollutants. Manufacturing employment statistics, specified by jurisdiction, serve as an indicator of the geographic distribution and relative intensity of industrial activity. Other statistics such as value added by manufacture, number and type of establishments, and payroll, etc., may be useful to indicate the nature and location of industrial activity in a metropolitan area. In addition, growth of manufacturing employment and industrial development should be considered before region boundaries are recommended. A report discussion should be supplemented where possible with tabulated statistical data, land use maps, employment density maps, employment-growth density maps, etc.

### 4. Land Use

Land use maps may be used to provide an indication of the geographic location of population, industry, commercial activity, highway networks, and other pollutant producing activities. These provide a valuable supplement to land use, population, and manufacturing statistics, by revealing more fully the urban character of an area. Land use maps may provide additional information generally not evident in statistical data.

### 5. Existing Regional Arrangements

Existing regional arrangements may take the form of councils of government or elected officials, regional planning commissions, State-defined planning districts, economic development districts, transportation study areas, and other region-wide geographic bases over which planning and statistical data-gathering is conducted. Generally, the existence of one or more of these regional arrangements in an area serves as an indicator of those jurisdictions (counties) which have been cooperating closely for planning purposes. Also, they indicate those

jurisdictions which have been integrated through social and economic interdependence. Data collected from the regional planning commissions will generally reflect this interdependence. Regional planning agencies may further provide some indication of the degree of existing cooperation among its member jurisdictions.

The designation of an air quality control region compatible with existing multijurisdictional arrangements is desirable since the implementation of a regional air pollution control plan is dependent upon a cooperation among the various levels of government. In addition, regional councils and planning agencies may be capable of providing assistance in the development of air quality standards and implementation plans which recognize the close relationship between air quality management and fields such as transportation, land use patterns, solid-waste disposal, and so on.

The inclusion of an entire planning region or planning and development district in a proposal for the sake of forming an administratively cohesive unit should be weighed against the technical aspects of the air pollution problem itself. Where technical considerations call for a smaller region, the region proposal may favor the larger planning region rather than destroy the administrative unity of its member jurisdictions. If the physical dimensions of the problem exceed a planning region's boundaries, fullest consideration should be given to the protection of the health and welfare of the population in the outer areas before selecting boundaries. However, where source or receptor locations lie beyond a planning region's boundaries, the inclusion of additional jurisdictions should be weighed against the preservation of the administrative unity of a region.

#### 6. Other

Region-wide and local planning commissions may be able to provide additional useful data. Such data may include information on motor vehicle traffic (intensity, location, and existing and projected highway networks). This information is useful since motor vehicles are the major source of carbon monoxide pollution and are a substantial contributor of other air contaminants. In addition, commutation patterns may be helpful in determining the degree of interdependence of adjoining jurisdictions.

#### E. SUMMARY

The list of factors outlined above is not intended to prevent the consideration of additional factors relevant to determining a region's boundaries. Thus maximum flexibility is allowed the States in producing documents recommending region boundaries, though in the direction of considering more rather than fewer of the factors discussed above. The general form which the report takes is left to the discretion of the State.

In producing a report recommending a region, NAPCA does not require the generation of additional data by the States beyond that which is presently available. It is expected, however, that a thorough investigation be conducted to ascertain the availability of all information which would add to the strength of the report. Appendix B provides a list of general sources and source types from which specific types of information may be obtained.

PART V. REQUIREMENTS OF THE EXECUTIVE OFFICE OF THE PRESIDENT

In designating air quality control regions, the Department of Health, Education, and Welfare is expected to conform to the requirements of Bureau of the Budget Circular No. A-95,\* dated July 24, 1969, which relates to the coordination of planning in multijurisdictional areas. The objective of this document is to eliminate overlap, duplication, and competition in State and local planning activities assisted or required under Federal programs and to encourage the most effective use of State and local resources available for development planning. Circular A-95 also has been developed to encourage and facilitate State and local initiative and responsibility in developing organizational and procedural arrangements for coordinating comprehensive and functional planning activities. The Circular directs the Federal Government to establish regions which conform to State-established planning and development districts unless there is clear justification for not doing so. Where State planning and development districts have not been defined, districts established under interlocal agreement and under related Federal programs will be considered in the designation of air quality control regions.

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\*Inquiries concerning or requests for Circular A-95 may be addressed to the Office of Executive Management, Bureau of the Budget, Washington, D. C. 20503.

APPENDIX A. LIST OF AIR QUALITY CONTROL REGIONS

The following list identifies the central cities of the 32 metropolitan areas announced for early designation as air quality control regions by the Secretary, DHEW, June 20, 1968.

- |                      |                          |
|----------------------|--------------------------|
| 1. Washington, D. C. | 17. Hartford             |
| 2. New York          | 18. Indianapolis         |
| 3. Chicago           | 19. Minneapolis-St. Paul |
| 4. Philadelphia      | 20. Milwaukee            |
| 5. Denver            | 21. Providence           |
| 6. Los Angeles       | 22. Seattle-Tacoma       |
| 7. St. Louis         | 23. Louisville           |
| 8. Boston            | 24. Dayton               |
| 9. Cincinnati        | 25. Phoenix              |
| 10. San Francisco    | 26. Houston              |
| 11. Cleveland        | 27. Dallas-Ft. Worth     |
| 12. Pittsburgh       | 28. San Antonio          |
| 13. Buffalo          | 29. Birmingham           |
| 14. Kansas City      | 30. Toledo               |
| 15. Detroit          | 31. Steubenville         |
| 16. Baltimore        | 32. Chattanooga          |

The following list identifies the central cities of the 25 additional metropolitan areas announced for designation as air quality control regions by the Commissioner, NAPCA, March 24, 1969.

- |                          |                                |
|--------------------------|--------------------------------|
| 33. Atlanta              | 45. Albuquerque                |
| 34. Memphis              | 46. Lawrence-Lowell-Manchester |
| 35. Portland, Oregon     | 47. El Paso                    |
| 36. Salt Lake City       | 48. Las Vegas                  |
| 37. New Orleans          | 49. Fargo-Moorhead             |
| 38. Miami                | 50. Boise                      |
| 39. Oklahoma City        | 51. Billings                   |
| 40. Omaha                | 52. Sioux Falls                |
| 41. Honolulu             | 53. Cheyenne                   |
| 42. Beaumont-Port Arthur | 54. Anchorage                  |
| 43. Charlotte, N. C.     | 55. Burlington, Vt.            |
| 44. Portland, Maine      | 56. San Juan                   |
|                          | 57. Virgin Islands             |

## APPENDIX B. TECHNICAL AND NON-TECHNICAL DATA SOURCES

### TECHNICAL DATA

|                    | <u>Source</u>                                                                                                                                                                                                                                                                 |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Emission Inventory | To be conducted by NAPCA or by State program. When conducted by NAPCA, a report will be provided to State agency complete with basic emissions data and, where possible, graphic presentations to supplement the data (see discussion, page 11).                              |
| Air Quality Data   | Derived from State and local sampling activity, from National Air Surveillance Network (NASN) data, and from technical studies which may have been conducted.                                                                                                                 |
| Diffusion Model    | Basic computer output in the form of isopleths, along with wind data and mixing depths, and a brief description of model, provided by NAPCA. Where State wishes to apply model themselves, NAPCA will provide appropriate diffusion model program. (See Discussion, page 13). |
| Other              | Technical surveys, studies, etc., conducted in the area of concern, which consider such factors as topography, meteorology, air quality, and pollutant emissions.                                                                                                             |

### NON-TECHNICAL DATA

|                       | <u>Typical Source Types</u>                                                                      |
|-----------------------|--------------------------------------------------------------------------------------------------|
| Population Statistics | State, Regional, and County Planning Commissions<br>State Department of Commerce and Development |

Manufacturing Employment  
Statistics

State, Regional, and County  
Planning Commissions  
State Department of Commerce  
and Development  
State Employment Security  
Commission

Land Use (Industrial,  
Residential, Commercial,  
etc.)

Regional and County Planning  
Commissions

Other Useful Data (trans-  
portation networks, vehicular  
traffic intensities,  
commutation patterns,  
residential density,  
wholesale and retail  
trade volumes, etc.)

State, Regional, and County  
Planning Commissions  
Transportation Study Groups

Existing Regional  
Arrangements

Consider boundaries of:  
Regional Planning Commissions  
Councils of Government  
Economic Development Districts  
State Planning and Development  
Districts  
Resource Conservation and  
Development Projects  
Transportation Study Areas